Name: Date: Period:

**Microorganism Notes (Bacteria, Viruses, Protists, & Fungi)**

**Characteristics of Bacteria:**

* Bacteria are the most abundant \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = one-celled
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = no nucleus or membrane-bound organelles

Where do they live?

Provide several examples:

What size are they?

You can fit 1,000 mid-sized bacterium on the period at the end of a sentence.

What is the structure of bacteria? Provide a drawing here.

3 shapes of bacteria are: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

* Coccus = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_shaped.
* Bacillus = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ shaped.
* Spirillum = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ shaped.
* Draw an example of each shape below.

How do bacteria REPRODUCE?

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = splitting into 2 parts

How do bacteria EAT?

* 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ -- makes own food using \_\_\_\_\_\_ energy
  2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ -- breaks down dead stuff
  3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ -- harmfully lives off other organisms

Bacteria can be good: Bacteria can be bad:

1. In our \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 1. \_\_\_\_\_\_\_\_\_\_\_\_ food

2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. \_\_\_\_\_\_\_\_\_ Examples: E. coli, salmonella,

4. Provide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ staphylococcus, and

5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ streptococcus

6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ -- clean up Earth’s land and water

**pathogen** – organism that causes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**antibiotic** -- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ used to kill \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Characteristics of Viruses:**

* Considered both living and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
  1. Living = can \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
  2. Nonliving = can not \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* Can only \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (copies DNA) in living cells.
* Needs a \_\_\_\_\_\_ -- organism that a \_\_\_\_\_\_\_\_\_\_\_\_ lives in or on
* Structure = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Viral Reproduction:

Examples of viruses:

5 ways to transmit diseases:

**Vaccine** = weakened form of a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_to create \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to that disease

**Epidemic** = rapid \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_of a disease through a large \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name: Date: Period:

**Microorganism Notes (Bacteria, Viruses, Protists, & Fungi) KEY**

**Characteristics of Bacteria:**

* Bacteria are the most abundant organisms on Earth.
* Unicellular = one-celled
* Porkaryote = no nucleus or membrane-bound organelles

Where do they live? Everywhere

Provide several examples: dirt, air, food, surfaces, skin, food, extreme environments

What size are they? Microscopic

You can fit 1,000 mid-sized bacterium on the period at the end of a sentence.

What is the structure of bacteria? Provide a drawing here.

3 shapes of bacteria are: coccus, bacillus, and spirillum.

* Coccus = sphere (circle) shaped.
* Bacillus = rod shaped.
* Spirillum = spiral shaped.
* Draw an example of each shape below.

How do bacteria REPRODUCE?

1. binary fission = splitting into 2 parts

How do bacteria EAT?

1. Producer -- makes own food using sun’s energy
2. Decomposer -- breaks down dead stuff
3. Parasite -- harmfully lives off other organisms

Bacteria can be good: Bacteria can be bad:

1. In our bodies 1. Spoils food

2. Medicine 2. Pathogen

3. Food Examples: E. coli, salmonella,

4. Provide oxygen staphylococcus, and

5. Decomposer streptococcus

6. bioremediation -- clean up Earth’s land and water

**pathogen** – organism that causes disease

**antibiotic** -- medicine used to kill bacteria

**Characteristics of Viruses:**

* Considered both living and nonliving.
  1. Living = can reproduce.
  2. Nonliving = can not grow or respond.
* Can only reproduce (copies DNA) in living cells.
* Needs a host -- organism that a virus lives in or on
* Structure = genetic material + capsid (protein coat).

Viral Reproduction:

Examples of viruses: common cold, influenza, chicken pox, AIDs, MMR

5 ways to transmit diseases: air, water, parasite (carrier), spoiled/uncooked food, body fluids

**Vaccine** = weakened form of a pathogen to create resistance to that disease

**Epidemic** = rapid spread of a disease through a large area